

REMARKS

This is in response to the Office Action mailed January 16, 2002. With this Amendment claims 1-4 and 6-7 have been canceled and claims 6 and 8 have been amended. All pending claims 5 and 8-9 are presented for reconsideration and allowance.

The motor of the present invention prevents a coil wound around an outer portion of an iron core from loosening and contacting a rotor. The motor is provided with a cylindrical insulating apparatus that is interposed between the inner portion of the coil and the rotor, for insulating the rotor from the coil. The insulating apparatus and the coil are together wound by an insulating yarn.

In the Office Action, claims 1-19 were rejected under 35 U.S.C. § 112. This rejection related to the term "main resistance coil" and the term "sub-resistance coil". This language has been removed from the claims and it is believed that the rejection may be withdrawn. Applicant notes that the present invention is applicable to motors with any number of coils. It is believed that the rejection may be withdrawn. NIC

Cited reference US 5,239,221 (Juan) .

According to the Office Action, cited reference US 5,239,221 and referring to FIG. 1, a pole portion (17, 27), an insulating member (131, 231), and a coil (14, 24) are arrayed coaxially with respect to a rotor. The insulating member is interposed between the pole portion of yokes (16, 26) and the coil, for insulating the yokes from the coil. This is different from the claimed invention in which the insulating apparatus is disposed between the coil and the rotor. The claimed configuration is for insulating the rotor from the coil and for preventing the coil from loosening. NIC

Cited Reference US 3,719,988 (Nielson)

U.S. Patent No. 3,719,988 (Nielson) relates to centering the rotor. The reference does not show or suggest an

insulating layer having a cylindrical shape and being disposed directly between the inner portion of the coil and the rotor as set forth in independent claim 5. X

Accordingly, the amended claim 5 is not shown or suggested by the reference. Thus, claims 8 and 9 dependent from claim 5, are also patentable.

Cited Reference US 4,218,630 (Watanabe)

U.S. Patent No. 4,218,630 differs from the claimed invention in that insulating strap layer is interleaved between different phase coils, for insulating the coils from each other. The claimed invention provides an insulator between the coil and the rotor. Therefore, the rejection may be withdrawn.

In view of the above comments and remarks, it is believed that the present application is in condition for allowance. Consideration and favorable action are respectfully requested.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

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MARKED-UP VERSION OF REPLACEMENT CLAIMS

Claims 1-4 and 6-7 are canceled with this Amendment.

5. (Amended) A motor comprising:

a stator having an iron core;

a rotor disposed in the stator;

a coil wound around the iron core of the stator; and
an insulating apparatus separating the rotor from the coil, the
insulating apparatus preventing contact between the coil and the
rotor when the coil expands during operation of the motor, and

wherein the insulating apparatus comprises:

an insulator having a cylindrical shape and being

disposed directly between the inner portion of the
coil and the rotor; and

a yarn securing the insulator to the coil.

8. (Amended) The motor as claimed in claim ~~6~~5, wherein the
insulator comprises a refrigerant-proof and oil-proof material.